

Evidence for a collinear easy-plane magnetic structure of multiferroic $\text{EuFe}_3(\text{BO}_3)_4$: Spectroscopic and theoretical studies

Popova M., Malkin B., Boldyrev K., Stanislavchuk T., Erofeev D., Temerov V., Gudim I.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016 American Physical Society. We performed high-resolution polarized optical transmission spectroscopy and theoretical studies of multiferroic $\text{EuFe}_3(\text{BO}_3)_4$ single crystals in the three phases: paramagnetic $R\bar{3}2(T > T_s = 84\text{K})$ and $P3121(T_s > T > T_N = 34\text{K})$, and antiferromagnetic (T